

**PATENT APPLICATION**

**RESPONSE UNDER 37 CFR §1.116  
EXPEDITED PROCEDURE  
TECHNOLOGY CENTER ART UNIT 3723**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Takashi IGARASHI et al.

Group Art Unit: 3723

Application No.: 10/611,918

Examiner: H. SHAKERI

Filed: July 3, 2003

Docket No.: 108833.01

For: LENS MACHINING APPARATUS, LENS MACHINING METHOD, AND LENS  
MEASUREMENT METHOD

**REQUEST FOR RECONSIDERATION AFTER FINAL REJECTION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In reply to the April 22, 2008 Office Action, reconsideration of the application is respectfully requested in light of the following remarks.

Claim 5 is pending in this application. The previous Office Action, mailed September 17, 2007, rejected claim 5 under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Specifically, the Office Action asserted that the terms "turning speed of the revolving machining tool," "turning speed of the held plastic lens," and "number of revolutions of the plastic lens," rendered claim 5 indefinite. The Office Action asserted that these features were not specifically shown in the Table in Fig. 4. In response to Applicants having made arguments traversing that rejection, the rejection of claim 5 under 35 U.S.C. §112, second paragraph, is withdrawn in this Office Action. This Office Action, however,

objects to the drawing' as allegedly not showing every feature recited in the pending claims. Specifically, the Office Action alleges that the Table does not specifically show a turning speed of the revolving machining tool, the turning speed of the held lens, and a number of revolutions of the lens. In the exemplary embodiment shown in Fig. 24, it is not necessary to specifically delineate each of the recited parameters. The Table in Fig. 24, along with the accompanying discussion, clearly instructs those of ordinary skill in the art regarding the features recited in the pending claims. These features are not amenable to questionable construction. Where the detailed illustration of a specific feature is not essential to the proper understanding of the invention, exemplary embodiments, such as those shown in the Figures of this application, suffice to clearly represent the recited terms. It is, therefore, improper to assert that Applicants are required in some manner, to depict a turning speed of the revolving machining tool, the turning speed of the held lens and a number of revolutions of the lens as these features are not amenable to depiction in any Figure. The fact that these specific terms are not used in Fig. 24 does not render these terms indefinite, nor does it form a proper basis for requiring Applicants to amend the drawing in any way. Withdrawal of the objection to the drawing is respectfully requested.

The Office Action, in paragraph 3, rejects claim 5 under 35 U.S.C. §103(a) as being unpatentable over JP-A-64-016346 (hereinafter "JP '346"). The Office Action, in paragraph 4, rejects claim 5 under 35 U.S.C. §103(a) as being unpatentable over JP '346 in view of U.S. Patent No. 5,053,971 to Woods. These rejections are respectfully traversed.

JP '346 teaches a technique for rough-machining and finish-machining workpiece, in which a technique is described for subjecting the workpiece to milling by a milling-cutter under NC control which is characterized by precision (see, e.g., page 1 of JP '346).

Woods teaches types of desired bevels to be formed on a lens circumferential surface being determined, and the placement of such bevels being accurately set by mapping both

front and rear surfaces of a lens blank, and by verifying that there will be sufficient thickness at the peripheral edge of the cut lens to permit beveling and to ensure that chipping or fracturing of the lens edge will not occur when the optical lens is being edged (see, e.g., col. 4, lines 17-45, col. 8, lines 11-19, and col. 9, line 57 and below).

JP '346 discloses only that a material to be machined is roughly machined and finishing-machined. Specifically, the materials on which JP '346 operates are manufactured by milling-cutter controlled by NC device. JP '346 does not teach, nor would it have suggested, that an entire circumference can be machined under almost the same conditions and that machine surfaces can be finished to have uniform conditions in any conditions of roughly machining and performing finishing machining for edging the circumferential surface of a lens being machined based on the material type, the lens circumferential edge thickness of the lens being machined, machining type, turning speed of the lens, or the number of revolutions of a lens being machined.

In JP '346, milling is described which generally stated is a method of fixing a workpiece and moving a blade with respect to the fixed workpiece, as conventional milling is understood by those of ordinary skill in the art. Conversely, the edging method that is the subject matter of the pending claims is one in which the workpiece is subjected to edging by rotating a tool while rotating a lens. One of ordinary skill in the art would recognize that (1) attempting to edge a circular spectacle lens with a milling-cutter as disclosed in JP '346 would like to result in breakage of the spectacle lens or cracks being developed in the edged surface; and (2) that milling by a milling-cutter controlled by an NC device as disclosed in JP '346 is generally used to machine a curved surface. In this regard, one of ordinary skill in the art would recognize that JP '346 may be used to machine the curved surface of a spectacle lens, but would not be amenable to being adapted to edging a plastic spectacle lens. For at least these reasons, it is not reasonable to suggest that one of ordinary skill in the art, given

the teachings of JP '346 would have, in any way, modified those teachings in the manner suggested by the Office Action to render obvious the subject matter of the pending claims.

Further, the Office Action concedes that JP '346 does not explicitly disclose groove engraving and chamfering, as positively recited in the pending claims. The Office Action concludes, however, that such modification would have been obvious to one of ordinary skill in the art by adapting a method and the table to output values for grooving and chamfering. Interestingly, the Office Action does not seem satisfied with its own assertion in that claim 5 is separately rejected under 35 U.S.C. §103(a) as being unpatentable over JP '346 in view of Woods. In paragraph 4, the Office Action concedes again that JP '346 does not disclose groove engraving and chamfering and the thickness of the lens, but rather indicates that Woods allegedly makes up for the shortfalls in the application of JP '346 to the subject matter of the pending claims. Both of these conclusions, and the limited analysis underlying these conclusions, fail for at least the following remarks.

Woods does not teach an entire circumference can be machined under almost any conditions and machine surface can be finished to uniform conditions in any conditions by roughly machining and performing finishing machining for edging the circumferential surface of the lens being machined based on material type and all the other features positively recited, for example, in independent claim 5. Woods teaches edging to include beveling, grooving and chamfering. Woods, however, does not teach rough machining and finish machining. The "edging" of the subject matter of the pending claims is, therefore, different from the allegedly corresponding edging of Woods. An object of Woods is to determine accurately the placement of the bevel regardless of the size, base curve and the shape of a lens (see, e.g., col. 9, lines 54 and 55). Conversely, the subject matter of the pending claims is directed to machining an entire circumference under almost same conditions, finishing machine surfaces to uniform conditions in any conditions, i.e., any type of lens being machined, and decreasing

lens axis displacement and increasing tool life (see, e.g., page 66 of Applicants' disclosure). The Office Action indicates that Woods allegedly teaches chamfering or beveling lenses in which proper speed and feed rate are set based on the material selected and thickness. Woods, however, does not specifically disclose a method for adjusting the speed (and the number of revolutions) for obtaining maximum efficiency of the lens manufacturing method disclosed. Additionally, in Woods, the material selected relates to the type of bevel (see, e.g., col. 9, lines 57 and below). Finally, the thickness relates to verifying that there will be sufficient thickness at the peripheral edge of the cut lens to permit beveling and to ensure that chipping or fracturing of the lens edge will not occur when the optical lens is being edged (see, e.g., col. 4, lines 17-45).

By contrast to the above, the subject matter of the pending claims is directed to a method by which a thickness of a lens is input and the lens is machined at a rate corresponding to the thickness of the lens (see, e.g., page 64, line 19 - page 65, line 26). It is for these reasons that Woods does not make up for any shortfall in the application of JP '346 to the subject matter of the pending claims.

Further, it is unreasonable to conclude that one of ordinary skill in the art would have predictably modified JP '346 on its face, as is asserted, in conclusory manner, in paragraph 3 of the Office Action, or predictably combined JP '346 with Woods in the manner suggested by the Office Action, as is asserted in conclusory manner in paragraph 4, with any reasonable expectation of success. With regard to this latter conclusion, JP '346 relates to machining curved surfaces, namely machining surfaces. As discussed above, JP '346 cannot be adapted to circumferential surface machining of a lens to be machined. As such, JP '346 does not give any suggestion of the type of plastic lens and the thickness of the lens to be rough machined and finish machined, as may be suggested by Woods. It is not reasonable, therefore, to conclude that one of ordinary skill in the art, even given the disclosures of JP '346 and

Woods, would have predictably combined and/or modified the disclosed inventions in the manner suggested by the Office Action with any reasonable expectation of success.

Further, MPEP §2142 instructs that the proper standard by which to determine obviousness requires (1) that the Examiner step backward in time into the shoes of the hypothetical "person of ordinary skill in the art," (2) that "[i]n view of all the factual information, the Examiner must then make a determination whether the claimed invention 'as a whole' would have been obvious at the time to that person," and (3) that any knowledge gained from Applicants' disclosure must be put aside at reaching this determination in order to avoid the tendency to resort to the impermissible application of hindsight reasoning based on the roadmap provided by Applicants' disclosure. Clearly, there is nothing in JP '346 or Woods to suggest that one of ordinary skill in the art at the time of Applicants' invention may have, in any way, predictably combined these references in the manner suggested by the Office Action, and such has not been adequately shown by other objective evidence of record.

To any extent that Woods teaches edging, it is not a reasonable conclusion, simply based on this assertion, that one of ordinary skill in the art would have predictably combined any of the teachings of Woods with JP '346 as is suggested by the Office Action, in achieving the objectives which are intended to be achieved by, and in the manner of, the subject matter of the pending claims.

Even post-*KSR*, the analysis supporting an obviousness rejection must be explicit. The Supreme Court in *KSR* approved the conclusion set forth in the decision of the Federal Circuit in *In re Kahn* (citations omitted) that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." This standard is not met here with the mere conclusory statement that one of ordinary skill in the art may have (1) modified JP '346 in the manner suggested, or (2) combined any disclosure of edge beveling and/or

chamfering of Woods with the machining process of JP '346 "to adapt the method for operations like chamfering, grooving, etc." In other words, to any extent that this conclusion provides what can even be asserted as an articulated reasoning, there is no rational underpinning for this alleged articulated reasoning.

MPEP §2143 is explicit in setting forth exemplary rationales to guide the obviousness analysis in supporting a rejection under 35 U.S.C. §103. The mandate of this MPEP section is that "[t]he key to supporting any rejection under 35 U.S.C. §103 is the clear articulation of the reason(s) why the claimed invention would have been obvious." Not only is this standard not adhered to, but there is not even an attempt by the Office Action to frame the asserted obviousness rejections over JP '346 or the asserted combination of applied references under any exemplary rationale set forth in the Patent Office's guidance, which should direct such analysis.

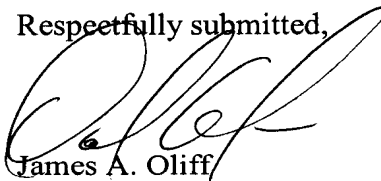
For at least the foregoing reasons, JP '346, or the combination of JP '346 and Woods, which are not combinable in the manner suggested by the Office Action, would not have rendered obvious the combination of all of the specific features positively recited in independent claim 5.

Accordingly, reconsideration and withdrawal of the rejections of claim 5 under 35 U.S.C. §103(a) as being unpatentable over JP '346 or unpatentable over JP '346 in view of Woods, are respectfully requested.

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claim 5 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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JAO:DAT/cfr

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